



Absolute VMS Specification

For fisheries administrations requiring an advanced, cost-effective and fully-integrated VMS solution, Pole Star has developed the Absolute VMS.

Overview

Fully integrated with Pole Star's state-of-the-art Vessel Monitoring Software, the Absolute VMS system includes:

- Absolute VMS: IsatData Pro terminal with internal backup battery
- Alert@Sea emergency alert panel
- Absolute e-Logbook

The Absolute VMS reports the vessel's location - accurately and privately - to the Fisheries Monitoring Centre at programmable intervals.

Protected from the elements, as well as from intentional tampering, the robust unit is tough enough to last for years with only minimal maintenance.

Internal battery backup ensures that the unit remains operational, even in the event of an onboard power failure.

Key benefits

- Fully integrated and complete system
- Anti-tamper alerts
- 5-7 days autonomy on backup battery power
- Robust and rugged design
- Low installation cost
- Low-maintenance
- Alert@Sea emergency button (optional)
- Absolute e-Logbook (optional)
- 24/7 customer support



Alert@Sea



**Designed to withstand
the harshest environments**

The Absolute VMS

A VMS should be as advanced as it is cost-effective. For this reason, the Absolute VMS utilises the very latest, low data rate IsatData Pro satellite communication service from Inmarsat.

The integrated SkyWave IDP-690 terminal has been engineered for mission-critical maritime applications and features an environmentally sealed enclosure, and low-elevation angle for reliable tracking. The IDP-690, which delivers up to 37 times more data than other satellite-based M2M services, also features low power modes for extended autonomous operation.

Engineered for harsh climates

Fishing vessels operate in diverse and extreme conditions, from the icy waters of the Alaskan crab fisheries, to the heat and humidity of the South Pacific, the Absolute VMS is designed to withstand the harshest environments in the world. With an operating temperature range of -40° to +85° C, an environmentally sealed satellite terminal and a rugged polycarbonate case & marine grade stainless steel cover, the Absolute VMS offers unparalleled resistance in inhospitable conditions.

Tamper resistant

Tampering and position report falsification undermine the efforts of fisheries authorities to manage quotas and the environmental impact of fishing. With this in mind, the Absolute VMS has been designed to prevent and deter tampering. In the event that the cover is removed, or power fluctuates, anti-tamper detectors trigger an alert to be sent to the Fisheries Monitoring Centre, automatically and privately.

Many satellite transceivers on the market today have terminal interfaces which make them susceptible to attempted position forgery. Unlike these traditional satellite transceivers, the Absolute VMS has no terminal interface.

Three step installation

The integrated Absolute VMS system is supplied complete with everything needed for installation, including the mounting bracket and internal battery, making setup as simple as connecting the power.

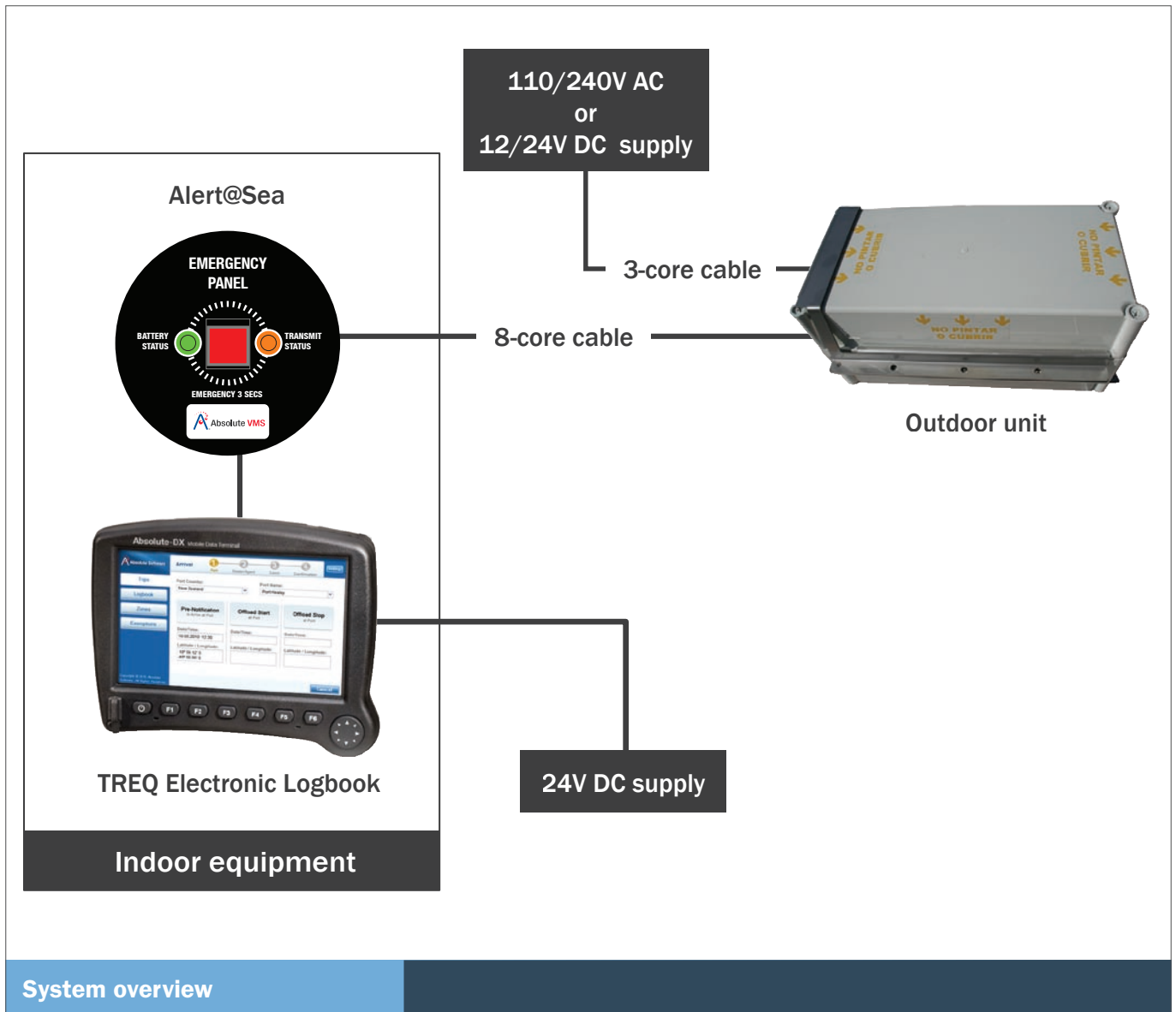
Alert@Sea

Commercial fishermen face some of the most perilous conditions on earth, yet their vessels typically lack the advanced communications equipment that could save their lives in an emergency.

The Alert@Sea alarm panel provides a direct and reliable communication channel to shore. On activation, the Alert@Sea delivers a call for assistance directly to the Fisheries Monitoring Centre, including the precise location of the vessel. Even in the event of a power failure, the Alert@Sea will remain operational on backup battery power for 5-7 days.

By recommending vessels install the Alert@Sea, you can offer fishermen an invaluable lifeline to shore, and support their safety at sea.

ALERT@SEA ALARM PANEL	
Overall dimensions	110mm x 110mm x 86mm
Weight	350g
Emergency button	Non-latching



Absolute e-logbook

The TREQ-VM is a secure, fully featured e-Logbook terminal that connects directly to the onboard VMS hardware for real time GPS position data and automatic transmission of reports.

The TREQ-VM is provided preloaded with customisable e-Forms to record trips, catch, well transfers, at-sea transhipments and entry/exit from zones for complete compliance with regulations. To minimise time-consuming manual entry, the terminal connects directly to the onboard VMS to obtain real time GPS location, date and time and automatically transmit the report to the relevant fisheries authority.

The powerful terminal is ideally suited for at-sea applications, featuring a rugged compact design, over-the-air e-Form updates and an operating temperature range of -20 to 60 °C. In addition to facilitating the electronic management of catch data and zones, the e-Logbook also provides fishing crews with weather updates and email functionality.

DISPLAY	
Type	800 x 480 WVGA, TFT colour LCD
Size	7" (178 mm) diagonal
Lighting	LED
Touch Screen	Analog-resistive

PHYSICAL	
Overall dimensions	200 (W) x 159 (H) x 50 (D) mm
Weight	1.4Kg
Housing Material	Blended polycarbonate and polyester resin

ENVIRONMENTAL	
Temperature	Operating: -20 to 60 °C; Storage: -40 to 85 °C
Humidity	0 to 95%, non-condensing
Vibration	4 g 10-1000 Hz
Shock	20 g, 11 ms, any axis

IsatData Pro VMS TECHNICAL SPECIFICATION

PHYSICAL	
Overall dimensions / weight	415mm x 190mm x 232mm; 18kg

ENVIRONMENTAL	
Temperature Range	Operating: -40°C to +85°C; Storage: -40°C to +85°C
Vibration	SAE J1455 (Sec 4.9, 4.2); MIL-STD-810G (Sec 514.6)
Environmental Rating	IP68
Humidity	SAE J1455, section 4.2.3.

POSITION REPORTING	
Automatic Position Reporting	YES
Change APR	YES
Poll on demand	YES

POWER	
Input voltage	110/240V AC or 12/24V DC
Power consumption (Typical @ 22 °C)	Receive: 8.3 mA; Receive with GPS: 60mA; Transmit: 0.75 A; Sleep: 100 µA
Batteries	18 Ah sealed lead acid battery pack
Battery life	5-7 days
Battery charger	Short Circuit Protection, Reverse Polarity Protection; Resettable Fuses overload protection, 90-260v wide input; 4 stage microprocessor charge control
Battery protection	Independent internal Battery protection monitors (BPM)

SATELLITE	
Satellite service	Inmarsat IsatData Pro
Coverage	Global, four overlapping regions
Frequency range	Rx:1525.0 to 1559.0 MHz; Tx:1626.5 to 1660.5 MHz
EIRP	5.0 dBW
Elevation angle range	-15° to +90°

GPS	
Acquisition time	Warm: 16 sec; Cold: 36 sec
Accuracy	4 m (CEP)
Sensitivity	Acquisition: -136 dBm; Tracking: -146 dBm
Channels	8

ALARMS & ALERTS	
Power interruption	YES
Anti-tamper	YES

CERTIFICATIONS / COMPLIANCE	
Satellite	Inmarsat
Regulatory	IEC60945, FCC, CE Mark, RoHS